

Elite Avenues:
Flyovers, Freeways and the Politics of Urban Mobility

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Abstract

Development and planning elites across many of the burgeoning megacities of the global south still work powerfully to fetishise elevated highways or flyovers as part of their efforts at “worlding” their cities. In such a context, and given the neglect of such processes in recent urban and mobilities literatures, this article presents an international and interdisciplinary analysis of the urban and vertical politics of raised flyovers, freeways and expressways. It argues that such highways need to be seen as important elements within broader processes of three-dimensional social segregation and secession within and between cities which privilege the mobilities of the privileged. The paper falls into six sections. Following the introduction, the complex genealogies of flyover urban design are discussed. Discussion then moves to the vertical politics of flyovers in the west Bank and post-Apartheid South Africa; the elite imaginings surrounding flyover construction in Mumbai; the political struggles surrounding the ribbons of space beneath flyover systems; and the efforts to bury or re-appropriate the landscapes of raised flyovers.

Keywords

Highways/freeways

Flyovers

Mobilities

Infrastructure

Verticality

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Introduction: Elite Avenues

“The freeway represents a twentieth-century fantasy of uninflected uninterrupted, flow” (Mokwe, 2010; 12).

“Overhead driveways and their sprawling, spaghetti-like networks have come to exemplify in the collective visual imagination the archetypal motif of late capitalist urban dystopia” (Berrebi , 2014; 23).

“Future humanity will look back on our cities with wonder, disbelief and disgust: at how totally urban spaces have been shaped around the velocities and demands of the private vehicle” (Twidle, 2017; 60),

As much as state of-the art airports, or the needle-sharp towers of gleaming and futuristic skyscrapers, development and

planning elites across many of the burgeoning megacities of the global south work powerfully to fetishise elevated highways or flyovers. Built at extraordinary expense for the small percentage of car-driving commuters – the bicycles, motor-scooters, auto rickshaws (or their local equivalents) and often even buses of the urban poor often being banned by criminal sanction – these putative symbols of modernity, technological advancement and a ‘race’ towards ‘globalness’ are inevitably hacked through densely built urban landscapes.

However, despite the pivotal role of raised expressways and flyovers in symbolizing urban elites’ efforts at asserting purported ‘global city’ status in their cities, critical urban research on these processes has neglected these ubiquitous strips of raised asphalt and concrete, in a rush to analyse less prosaic sites like skyscrapers, technology parks, airports, cultural flagships, sporting mega-events and the like (see Roy and Ong, 2011). “The concrete and tarmac of large transport projects, despite their visibility and ubiquity,” as Andrew Harris (2013; 357) writes, “have largely been neglected in analyses of globalising cities and urban ‘worlding’.”

Worse still, despite a burgeoning literature on the wider cultures and politics of automobility (see Böhm et al, 2006), freeways and flyovers have also featured inadequately in the so-called ‘mobilities turn’ that has been such a strong feature of humanities and social science research over the past two decades (although see Merriman, 2009, for a notable exception).

Often, emerging expressways are carefully planned to connect the archipelago landscapes of splintering and sprawling megacity areas, to then sustain further rounds of both processes (see Graham and Marvin, 2001). They lace together the securitised enclaves of residence, work, leisure and mobility that together

constitute the archipelago of urban life for the wealthy car-user. Indeed, the routes of elevated freeways, so often used as *cordon sanitaires* to separate and isolate districts within racialised or class-based planning regimes (Bullard et al, 2004; Henderson, 2006), are also sometimes deliberately designed to necessitate the demolition of informal cities of the poor. One recent raised highway along the Cooum River in the Indian city of Chennai, for example, was routed along this path carefully because, the planning consultants argued, “the road will result in the evacuation of slum areas present along the riverbanks” (cited in Coelho and Raman, 2010; 19).

The politics of access to highway networks for the public buses used by poorer communities present another frequent area of contestation. Historically, fierce debate still rages as to whether the low, bus-stopping bridges over Robert Moses’ iconic parkway system, a network built to connect Manhattan with New York’s coasts in the 1950s and 1960s, were *intentionally* built at that height to prevent poorer, non-white communities from accessing the system (see Garutti, 2016).

Edifices designed to literally lift up the mobile minority of car-driving *flâneurs* from the urban ground, to bring a striking aesthetic of mobile and modern life amidst cities where at ground level chaos and congestion reign, are thus often engines of homelessness and destruction. This is even before the effects of their air and sound pollution, or the forced segregation of people and neighbourhoods either side of the highway, are taken into account.

Elevated highways – and the elevated and metal vehicles they are designed to channel at high velocity– thus need to be seen as important elements within the broader processes of three-dimensional social segregation and secession within which the most powerful shift to colonise the various spaces above the

city ground as means of perpetuating their social power. They bring a complex ecology to their sites: damaging noise, pollution, dust, vibration and a permanent darkness deliver often terrible environmental conditions that, importantly, are invisible to the traffic above. (The epidemiological data detailing the increased rates cancers, heat problems and breathing disorders faced by those who live adjacent to highway corridors is damning – see, for example, Bae et al, 20017; Maantay, 2007). But the creation of new urban corridors in the shadow of the snaking concrete and steel also offers opportunities for the more marginalised in the city to at least claim at modicum of space within starkly contested urban spaces.



Figure 1 The NAIA Expressway, a new 7km private toll highway which connects the terminals of Manila's main Ninoy Aquino International Airport to other private tolled highways, as well as a new casino complex developed by the builder and operator of NAIA

Source: public domain, wiki license,
http://photos.wikimapia.org/p/00/01/90/28/15_big.jpg

The burgeoning Philippine capital of Manila offers a paradigmatic example of how raised flyovers geared towards urban elites can radically reengineer the geography of extending cities over sustained periods (Figure 1). Here, a thirty-year programme to build 13 raised and privately-tolled ‘skyway’ flyovers, highways and ‘expressways’ has worked to reorganise the geography of social elites, already emboldened by the privatisation and neoliberalisation of the governance of the city. As a consequence, as Ray Roderos explains

“with the quest for global city status [in Manila] through a more liberal economy and through the amount of capital flowing into the city, we see that the government and the private sector have built freeways and flyovers which crisscross the realm of the public city to connect their own developments” (2013; 85).

With limited-access sliproads creating fast, topological connections between emerging “islands of affluence” distributed across the core, suburbs and exurbs of this extending city-region of 13 million people – gated communities, malls, business areas, airports, Special Economic Zones, corporate sports complexes and the like – this complex of private highways -- and the air-conditioned cars that flit across them -- thus work as the “avenues which Metro Manila’s urban elite use to ferry themselves to their shopping malls and offices, bypassing the roads which many public transportation vehicles use” (Roderos , 2013; 93). With tolls of around 1 U.S. dollar for every 20 km, and car ownership rates of only 53% in 2014, the system, and the entire geography, systematically excludes Manila’s poor population. Moreover, worsening terrific congestion is then used as a justification to further increase

tolls in an effort to deter some users of the network and so reinstate the speedy, free-flowing traffic that cash-rich, time-poor commuters are willing to pay a premium for.

The result is an extending and ever-sprawling archipelago-geography. Within this, neoliberalised planning, targeted real estate and land speculation and the engineering of new, privatised and tolled highways for more affluent commuters together sustain a classic political economy of splintering urbanism. Such a geography is based on the parallel emergence of an archipelago of enclaves laced together by fast and ‘premium’ mobilities and connections that are ploughed through intervening areas whilst bypassing them (see Graham and Marvin, 2001). These new enclaves, and the highways that connect them, are violently implanted into the urban landscape in ways that often necessitate the demolition of informal settlements and the forcible eviction and dispersal of their residents, a process that Arnisson Ortega correctly diagnoses as accumulation by dispossession.

“Ribbons of Steel and Concrete”¹: Flyover Genealogies

“More than any other consumer good the motor car provided fantasies of status, freedom, and escape from the constraints of a highly disciplined urban-industrial order” (McShane. 1994; 24).

Efforts to build flyovers are striking for the way they involve “the promotion of a space divorced from and devoid of human bodies” (Robertson, 2007; 83). Inspired by Le Corbusier’s sketches of highway-based cities from above, what Sandy McCreery (1998; 38) characterises as “high vantage points overlooking the sweeping concrete curves” characterised the futuristic and utopian imagery of most artists’ impressions for

¹ The sub-title comes from Graebner (2007).

planned flyover projects. The architects for London's biggest raised flyover, the Westway, quoted Le Corbusier when celebrating the aesthetic and sublime power of the structure they would build: "When night intervened, the passage of cars along the autostrada traces luminous tracks that are like the trails of meteors flashing across the summer heavens" (cited in Jackson, 2001; 71).

The fetishisation of expressways and flyovers as icons of urban modernity, then, is far from new. What is striking, rather, is how the current fetish of the raised highway in global south cities – in cities as diverse as Santiago, Cairo, Mumbai, Manila, Bangalore, Bangkok, Jakarta, Tehran, Istanbul, Guangzhou, Dubai, Buenos Aires, Dhakka, Riyadh, Rio, Nairobi and Shanghai – mirror a similar preoccupation that gripped Europe and North America in the 1960s and 1970s. In all, the imbuelement of new highways with the superficially seductive ideas promising combinations of growth, progress, 'global city' status and free-flowing modernity have had to be systematically undermined by critics and activists – with highly varying levels of success. Before we explore these contemporary developments, though, it is necessary to briefly address the genealogies of the raised urban freeway.

Urban freeway systems seemed to offer a myriad of benefits to Western planners and urban politicians in the 1930s and 1940s: an end to traffic congestion; extraordinary speed and mobility across spreading cities; a boost to construction, auto and oil industries; a help to as often flagging central areas (especially in the US); and a symbol of progress and modernization to boot (see Dimento and Ellis, 2014). Techniques of 'rational', instrumental planning were here sustained by economic cost benefit analyses which priced the purported savings of

commuters' time once highways were built as a prime justification for highway projects.²

Along with mass housing towers, raised walkway systems and a range of other shopping, leisure, industrial and transportation projects, flyovers were thus incorporated into a myriad of ambitious urban planning schemes as central elements of the broader shift towards modernist, comprehensive urban 'renewal'. Boosterist press-releases from the 1950s and 1960s in Europe and North America are replete with images of (inevitably male) engineers, planners and politicians striding excitedly across the raised-up concrete strips of their new expressways as they are unveiled to the city's expectant population (Figure 2).



² Such analyses are now heavily discredited. For the critique of those used to justify the building of Melbourne's huge private City-Link tolled highway system in the 1990s, a network that has, like most new highways, singularly failed to bring predicted benefits, even for commuters, see Low and Odgers, (2012).

Figure 2: Masculine modernity: State officials walk the gleaming white Buffalo Skyway two weeks before its opening in 1955.

Source: Public domain. From William Graebner (2007)
“‘Ribbon of steel and concrete’: A cultural biography of the Buffalo Skyway (1955)” *American Studies*, Volume 48, Number 1, Spring, pp. 77-100

As is so often the case in global south megacities today, however, in reality, the zeal for ‘renewal’ often amounted to a zeal to violently erase (often racialised or demonised) urban districts deemed to be problematic or pathological. Such war-like levels of destruction, indeed, was often celebrated and glorified by technocratic planning and urban elites. Robert Moses, legendary head of New York’s powerful Port Authority development body, famously boasted that “when you operate in an overbuilt metropolis” like New York, “you have to hack your way with a meat ax” (cited in Berman, 1983; 290). (See Figure 3).



Figure 3: The cross-Bronx expressway under construction,
1955.

Source: public domain. Source:

<http://www.boweryboyshistory.com/wp-content/uploads/2016/09/Roads.FIGURE1.3.jpg>

Moses' cross-Bronx expressway, built to allow wealthy commuters to cross the Bronx rapidly on their journeys to work from richer suburbs to Manhattan, provides the archetype of modernist expressway as agent of urban devastation – all played out live for the commuters to watch below as they stream past on the raised flyover. Marshall Berman, a resident of the neighbourhood below, as it succumbed to huge demolitions and subsequent spirals of ruination, writes powerfully about the experience. “At first, we couldn't believe it,” Berman recalls:

“it seemed to come from another world. First of all, hardly any of us owned cars: the neighborhood itself and the subways downtown, defined the flow of our lives. Besides, even if the city needed a road... they surely couldn't mean what the stories seemed to say: that the road would be blasted directly through a dozen solid, settled, densely populated neighborhoods like our own: that something like 60,000 working and lower-middle class people, mostly Jews, but with many Italians, Irish and Blacks throw in, would be thrown out of their homes” (1983; 292).

Berman was one of several authors to coin the term ‘urbicide’ – the deliberate destruction of the city – to describe the way state subsidy, modernising zeal, and racialised hatred led to the bureaucratised destruction in many western cities through flyovers and other ‘renewal’ projects. His searing critique of the process – the destruction of extraordinary architectural

heritage, the devastations of economies and communities, the fetish for elite automobility – forms a pivotal part of his classic memoir *All That's Solid Melts Into Air* (Berman, 1983).

Flyovers and expressways, however, were often imagined as much more than mere conduits for rapid flows of vehicles. The fashion for imagining (and occasionally constructing) entire cityscapes as multi-level, vertically-organised megastructures between the 1920s and 1960s was founded in futurist and Corbusian dreams of lacing such structures together entire urban regions -- and nations – with high speed, limited-access flyovers (see Banham, 1976).

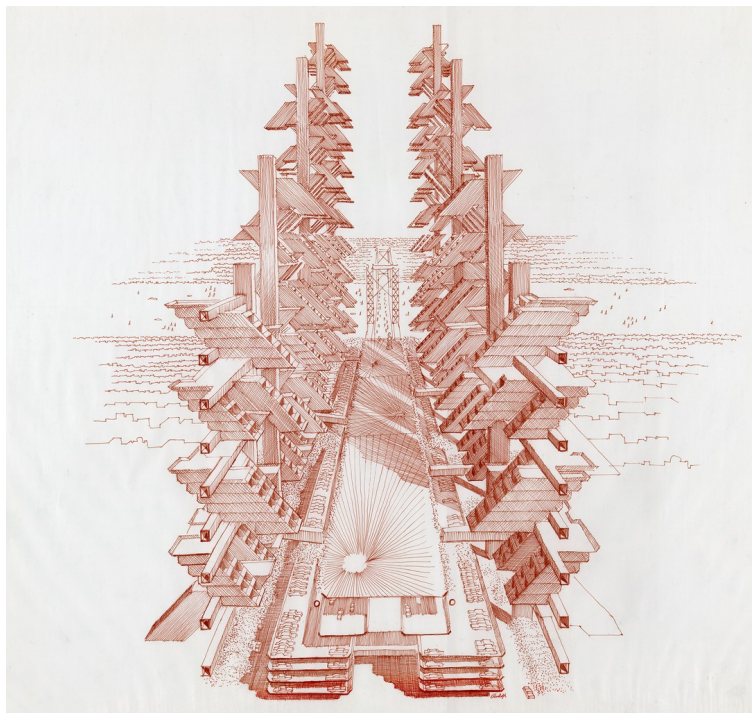


Figure 4 Paul Rudolph's 1870 plan for an urban megastructure based around a new flyover, neither of which were ever completed. The view is towards Williamsburg bridge,

Source: public domain.

https://upload.wikimedia.org/wikipedia/commons/thumb/3/34/LOMEX%2CView_to_Williamsburg_Bridge.tif/lossy-page1-1089px-LOMEX%2CView_to_Williamsburg_Bridge.tif.jpg

In Lower Manhattan in 1970, for example, Brutalist architect Paul Rudolph, in a project underwritten by the Ford Foundation, suggested that the new raised expressway built as part of the same system as the one across the Bronx, should be the basis for a raised-up linear city of vast housing blocks (Figure 4). Buckminster Fuller suggested similar structures around new flyovers in Toronto. Other influential auto-megastructure ideas developed in Europe. Geoffrey Jellicoe's 1961 'Motopia' project in the UK was notable (Jellicoe, 1961),

Such projects were usually too late, however. Whilst central flyovers in Western cities were still hugely influential as settings for urban cinema and science fiction, the backlash against comprehensive erasure of whole cityscapes in the name of highway-led 'renewal' – a backlash led by Jane Jacobs, author of the *Death and Life of Great American Cities* (Jacobs, 1961) – was in full swing. The Lower Manhattan Expressway was never built. Many other cities shelved plans for ever-more elaborate and destructive flyover and megastructure systems. Similar, but far less ambitious, housing schemes built using 'air' property rights around new flyovers, such as those at New York's Washington Bridge, have been plagued by serious health problems due to traffic pollution (a problem, as we shall see, that is still widely ignored by highway advocates).

To bring the story up to date, state-built urban highway projects, like everything else, have been neoliberalised in the last few decades. Private consortia now often design, finance and build new projects, or develop highways within financialised Public Private Partnerships (PPPs). These are now often based on the revenue inducements of journeys commodified using new information technology and tolling systems. Such new 'premium' urban highways networks are now common in cities as diverse as Melbourne, Toronto, Manila and Bangalore, and add the price mechanism as a further means of securing the

elitism of the mobilities they provide (see Holmes, 2000). In the global south, their construction has been a key element of the World Bank's programmes of structural adjustment, privatisation and financialisation.

Flyover Apartheid: The West Bank and Post-Apartheid South Africa

Flyover and highways construction always involves powerful struggles over the politics of who's movement matters, and who can be systematically constrained or interrupted, within contested boundaries and territories. In some conflict zones, such as the West Bank, the ability of flyovers and highways to forcibly separate space has allowed planners of systems of flyovers, tunnels and cuttings to construct a fractal, three-dimensional series of border lines. These work to separate the hypermobile and privileged worlds of Jewish settlers– the kinetic (colonizing) elite, to use Peter Sloterdijk's (1988) term - - from the geographically confined worlds of the colonized-- the kinetically impoverished Palestinians. In 1999, then Israeli Prime Minister, Ehud Barak, even suggested building a 47 km raised highway linking the West Bank to Gaza whilst, 'bypassing' any topological connection to the Israeli territory it would pass over. Apparently he got the idea from a raised highway he saw when visiting Miami (BBC, 1999).

Jewish-only highways and flyovers built to lace together illegal Jewish settler-colonies in the West Bank following the Oslo Accords, meanwhile, are often literally constructed above (as well as below within tunnels) the worlds of Palestinians that they systematically and violently exclude (Pullan et al, 2007). As Eyal Weizman (2002) describes, the network weaves a 3D apartheid topology (Figure 5):

“Some more grandiose Israeli projects have proposed highways to bypass Palestinian towns in

three dimensions. The Tunnel Road, for example, connects Jerusalem with the southern settlements of Gush Etzion and further, to the Jewish neighbourhoods of Hebron. To accomplish this, it has to perform a double contortion: stretched up as a bridge spanning over a Palestinian cultivated valley, it then dives into a tunnel under the Palestinian Bethlehem suburb of Beit Jala.”



Figure 5: Three-dimensional topologies of by-pass: Tunnel (below the Jewish-only settlement of Gilo) and bridge (above Paletinian area of Walaja Valley) to Gush Etzion. Part of the Bethlehem bypass.

Source: public domain, at
http://www.hasbarafellowships.org/uploads/cgblog/id44/Tunnel_to_Gush_Etzion.jpg

Away from the bridges and tunnels, on the highways’ long stretches of flyover, Jewish drivers see only a banal modern infrastructure of seamless connection and mobility: a powerful,

Zionist symbol of Israeli modernity, the compression of time and space, and possibly even the ‘taming of nature’ (Figure 5).

By contrast, Palestinians below, fenced off from accessing such highways by a system of roadblocks, bans and legal stipulations, experience diminished space, massive structural barriers, noise and pollution (Figure 6). Given that their lands are violently annexed and erased for the highways’ construction, it is no surprise that the concrete ribbons are viewed by Palestinians both as powerful symbols of oppression and means as powerful as any wall of horizontally separating them off into an archipelago of controlled and shrinking enclaves. The flyovers and highways, as Jeff Halper (2000) of the International Campaign Against House Demolitions suggests, are “massive, permanent structures; they flow, giving the feeling of ‘natural’ connections with no artificial borders, yet they claim land by their very routes; they are banal and can be made to look inoffensive and even benign and attractive.” (As the highways are themselves increasingly encased in walls and razor wire to further the exclusion of Palestinians, as shown in Figure 6, though, the latter assertion becomes harder to justify).



Figure 6 Above... Razor wire barricades protect Jewish commuters on the settlers' only West Bank highway , Road 443 Source: public domain Wikipedia

[https://en.wikipedia.org/wiki/Route_443_\(Israel\)/#/media/File:BarbedWireFence1.jpg](https://en.wikipedia.org/wiki/Route_443_(Israel)/#/media/File:BarbedWireFence1.jpg)

Road 443, the notorious Jewish-only strategic highway between Jerusalem and Tel Aviv, is a one of the most powerful examples of such vertical apartheid. Palestinians in and around the structure are forced to use tortuous tracks and small roads to move to and from their capital in Ramallah. Such routeways literally have to snake through drains and other gaps beneath the supporting concrete for the highway. Thus, as Jewish commuters are whisked ever faster and further (Figure 6), Palestinians have experienced radically reduced levels of mobility. Their journey times, where journeys are possible at all, have dramatically extended since the road was built, a problem worsened by Israeli checkpoints and increasingly aggressive soldiers.

The economic, social and cultural effects on the Palestinian population have been catastrophic: local economies are strangled; medical cases and access to schools and hospitals have dwindled; and bisected social and family ties have frayed. After the closure of Road 443 to Palestinians in the late 1990s, as Omar Jabary Salamanca (2014; 118) writes, dispossession was, in a sense, further ‘cemented’:

“children from the [village] of Attira could not be driven to school and now have to walk long distances to get there. In addition, because they are not allowed to pass over the existing road bridge they are obliged to pass under a rainwater drain conduit under Road 443 to reach school. In rainy seasons this passage becomes full of mud and water.”



Figure 7 ... And below... Drainage channel used by local Palestinians as their only means to cross Road 443 to access Ramallah on the other side of the highway.

Source: Omar Jabary Salamanca, personal communication.

In other cities characterised by extreme levels of conflict and spatial segregation, strategic highway corridors that connect global airports to downtowns present strips of particularly stark contestation. Most notable here perhaps is the 20 km stretch of South Africa's N2 highway that connects Cape Town International airport with the centre of South Africa's second largest city. Bisecting the Apartheid-era 'non-white' dumping ground of Cape Flats, which houses between 60% and 75% of Cape Town's overall population (up to three million people) in dense townships and shanty communities, the highway is one of the most contested in the world (Twidle, 2017).

Elites, politicians and mainstream media worry that the views of the desperately poor shanties for tourists on their way west via N2 to the glitzy enclaves of Cape Town's Atlantic coast damages the city's as a wannabe 'world-class' city. CCTV, criminalising legislation, rising fences and aggressive landscape architecture features made up of spiked rocks – “preventative rock fields” in the municipal jargon -- have been emplaced around the highway strip in attempts to prevent incursion or inhabitation from those who live on the highway's margins. These amount to a concerted campaign, in Hedley Twidle's (2017; 65) memorable words, of “open hostility to the non-motorised body.”

And yet incursions remain and they are common. Reporting on a “corridor crisis,” local press report that, on average, 26,000 people manage to cross the barriers and enter the highway strip every day. Aware of its strategic and vulnerable nature, protest movements have also repeatedly targeted the highway – what Twidle (2017; 66) has called the “Achilles' heel of the aspirant world-class city” -- and closed it to add power to their efforts.

Gangs also often target and rob drivers, and regularly rob pilots of international airlines on their way to overnight hotel stops.

Much more often, though, the strip is simply crossed by people trying to get from one adjacent place to another or by rough sleepers seeking to sleep in the median strip because it offers a (relative) refuge from persecution. Not surprisingly, casualties are many; around half of all the cases admitted to the adjacent main hospital are pedestrians hit by cars on the highway. Such carnage is an inevitable result of the stark kinetic and infrastructural politics of such highways in deeply divide, auto-dominated cities. Twidle and colleagues, in a walk along the highway and its base inspired by Situationist tactics, talks of the terror of crossing the streams of speeding cars and speculates that many die because they have never been privileged enough to actually drive a car and are therefore not equipped to conceptualise their speeds. "Still stuck on the island, crouched on your marks, getting set," he remarks:

"Waiting to go you are amazed (as you often are) that your soft pudding of a body has made it even this far in the world, given all the hard surfaces everywhere, the field of deadly forces you navigate through each day, the fast-moving torrents of steel and rubber just metres away – and here is your tiny, fragile human infrastructure, perched on the edge of the N2" (Twidle, 2017; 74).

Middle-class commuters, meanwhile, exasperated by what they see as poor police protection on the highway, organise social media and systems and vigilante patrols to warn of disruptions and robberies. Along with sensationalist media reports and official policy, their campaigns work, in effect, to "blurr ... the categories of pedestrian, protestor and criminal" (Twidle, 2017; 66). In stark protest, graffiti regularly adorns those

intersections and concrete faces near downtown slipways that are visible to the largest daily audiences – “Dehumanization zone,” “The City Works for the Few!” – until covered by municipal workers.

Global City Dreams: Flitting Over the Poor

“Air-conditioning on, music blaring, we accelerate from the last set of traffic lights onto the flyover. Signs flash-by: PROHIBITED: pedestrians, cycles, hand-carts, bullock-carts; NO ENTRY: bus, lorry; [and] one depicting a car travelling upwards at 45 degrees...

The route is continuous, clear, mostly smooth; we dart past a honking sports-utility-vehicle and are overtaken by motorcycle riders. On the rails along the side of the flyover, advertising for life insurance declares: ‘Heads you win, Tails you win...’

Up above through the car’s tinted windows I can see billboards: ‘Invest in India’s best performing infrastructure fund’, and pictures of a new Indica Vista car. The road gently twists and turns; an exciting collection of Mumbai buildings appear and then pass-by: grand mosques, art-deco apartment blocks, the skeletons of new high-rises in the distance. Down below streets crammed full of people puncture a continual array of shabby exteriors, balconies and open windows only a few metres away” (Harris, n.d.).

The relative demise of new flyovers in the West has merely been associated with their migration to the Global South. In no place have new elevated highways been more deliberately constructed to symbolize a megacity’s ‘arrival’ as a ‘global city’ than in Mumbai (although see Zhang, 2016, for a similar tale from Guangzhou in China). Elevated highways have been

central to Mumbai's redevelopment since the McKinsey managing consulting group completed an influential report for the Bombay First group of real estate and industrialists] elites in 2003 (see Bombay First/McKinsey & Company, 2003). "All world-class cities have express ring freeways", the report argued. And Mumbai – a city deemed by the report to be stuck in "reverse gear" – must have them too. A major programme of flyover construction was necessary, the report suggested, "such that a freeway can be accessed from any point in the city in less than 10 minutes" (report quotes from Anand, 2006; 2434).

Titled *Vision Mumbai*, this report further deepened the existing obsession of the ruling elites in Mumbai to use elite megaprojects and the mass demolition of shanty dwellings, in an effort forcibly reengineering Mumbai into a putative imitation of Shanghai (with its apparently smooth-running supermodern system of elevated freeways, relatively clear pavements and the allure and cachet of global centrality).

The result has been the epic construction of a series of over 50 elevated highways and flyovers throughout central Mumbai (Harris, 2013)(see Figure 8). These have been justified by both city and state governments, both of whom pledged to build roads as on a "war-footing" since the McKinsey report, as a means of 'decongesting' Mumbai and 'eliminating bottlenecks'. (The Minister of Public Works for the Shiv Sena-BJP coalition in the State Government of Maharashtra, Nitin Gadkari, later became national President of the BJP partly because of the accolades he received using his nickname 'Mr. Flyover' – see Harris, 2011).



Figure 8. The Santa Cruz-Chembur Flyover, Mumbai

Source: Andrew Harris, personal communication

As elsewhere, Mumbai's new flyovers have been sold as transformative icons offering the allure of free and uninterrupted circulation: literal roads to a supermodern and bright future for the city. "Flyovers [] and skywalks are much more electorally persuasive than more cost-effective but largely invisible traffic management schemes" (Harris, 2011).

In Mumbai, as in many other global south megacities, aerial concrete still seems to beget and embody classic tropes of economic modernization and allegorical "take-off". Involving constellations of pension companies, auto-makers, finance houses, construction and real estate firms, as well as the booming sector of private tolled-highway operators, new flyover projects are often sold as essential to the new political economy of neoliberal urbanism.

Autophilia Unbound: “Elevated Bliss” on “VIP Roads”

As well as supposedly symbolizing Mumbai’s status as a ‘global city’, flyovers are designed to offer unprecedented mobilities to elite car-users whilst systematically excluding the vast majority of Mumbai’s population. Most have been installed in corridors of movement most demanded by wealthy elites and the city’s business classes. The road to the airport – known locally as the ‘VIP road’ – was a first priority.³

The new highways and bridges are widely celebrated by the business-press as an infrastructural landscape apparently completely at odds with the ground-level congestion and infrastructural chaos on Mumbai’s streets. The language that emerges here is cinematic and poetic; it could have been lifted out of a Le Corbusier sketch book.

Celebrating the new, eight-lane, and privately-tolled \$150m Sea-link bridge system which bypassed a chunk of the city’s west coast, for example (Figure 9), *The Economist* marvels that, as the flyover is entered, “the swarm of auto-rickshaws fades”. Once elevated above the sea things improve further: “if you open the window the air is fresh”; “if you put your foot down you can hit racing speed” (*Economist*, 2012).

³ It is not uncommon, through the logics of splintering urbanism, for flyovers to gain different styles of design and construction according to the degree to which they are visible to elites, tourists and VIPs. In Shanghai – a megacity transformed by perhaps the world’s most extraordinary complex of raised highways – blue neon lights parallel every route to add to the cinematic experience of their use. See, for example, Hatherley (2012).



Figure 9 Mumbai's new \$270m Sea-link bridge system under construction. Now open, the bridge and its wider western highway cuts commute times between the super-elite suburb of Bandra and the central business district from 60-90 minutes to 20-30 minutes at peak times.

Source: public domain,

https://commons.wikimedia.org/wiki/File:Bandra-Worli_Sea_Link_from_Taj_Lands_End.JPG

For the Economist's reporter, all interruptions to autophiliac desire are removed during this 4.7km journey of "elevated bliss." The "berserk skyline" of the city rushes by and the "Portuguese fort and aboriginal fishing village that you zip past feel about as real as the scenery of a Disneyland ride." To the anonymous scribe, such an experience of capsular secession from the streets of the city are, however, all-too brief and tantalizing (see De Caeter, 2004). The failures to construct planned add-ons to complete the system along the entire West coast of Mumbai, amidst widespread allegations of corruption, only add to the frustration. The article's title – 'halfway to paradise' – makes it clear that, despite the "ghastly task of

clearing slums” for the highways, there remains only one imperative: the radical extension of such deeply elitist infrastructures to reclaim Mumbai’s sense of arrival as a truly ‘global’ city.

Elite Imaginings: ‘Beyond the Pane of Glass’

"It is a profoundly modern idea that we can enter a flow, be carried along with it, and exit again effortlessly, unscathed" (Mau, 1999; 204).

As with the *Economist*’s writer, those able to access to experience of the raised-up experience of the auto-flâneur often revel in the new cinematic experience of the three-dimensional city that the structures open up. Priya Sarukkai Chabria, a Mumbai poet and author of the recent book *Bombay/Mumbai Immersions*, relishes that Mumbai’s new flyovers not only bring radical new geographies of accessibility and convenience to their users. The flyovers also:

“give an alternative vision of Bombay/Mumbai through a display of its geography not otherwise discernible. For they offer a mid-level perspective of this city of extreme wealth and poverty. Often in Mumbai we are in high-rises, looking down at its ‘low life’ and velvet lights; or on the street, looking up at towers that tear into the sky juxtaposed with squat mouldering buildings. These new flyovers encourage one to look beyond the pane of glass, and outside one’s self” (cited in Soofi, 2013).



Figure 10 Shanty Solipsism: The view offered of a Mumbai shanty town to a car-driver using one the city's new raised flyovers

Source: Andrew Harris, personal communication

Tellingly, the collective 'we' invoked here is, of course, very particular: the community of rich auto-flâneur looking down or to the side on the aestheticised poor below as they speed past (Figure 10). (Startlingly, the nature and quality of the view of the elevated freeway driver often becomes a cause of political concern than the people they are viewing. In March 2013, for example, the Californian Transport authorities pledged to eradicate a 'tent-city' of homeless people on the embankments below Highway 94 in San Diego, because it was creating a risk of accidents by "distracting drivers" (Herrera, 2013)).

Policy Through the Windscreen

Until recently there was a tendency in Mumbai for even poorer social classes to lionize new roads, as symbols of a bright, oncoming future. However, the efforts of state authorities since

the adaption of the *Vision Mumbai* plan in 2003 to violently re-engineer Mumbai through mass displacement and demolition of the urban poor is now being heavily resisted.

The opportunity costs of the huge projects, in a city where the vast majority are confined to desperately overcrowded, dangerous and inadequate public transport, are now widely debated. The deliberately elitist nature of their design and operation, and their highly exclusionary and environmentally-damaging effects, are also increasingly apparent to all. Systems of high pedestrian fences, for example, designed to prevent the bodies of the non car driver from physically interrupting the dream of free-flowing traffic even as an accident victim, mean that many neighbourhoods in and around the points where freeways descend back to street level, have further disconnected adjacent neighbourhoods. “Traffic dividers are a visible indication of whom the hundreds of kilometers of new road space are intended for” (Anand, 2006).

In addition, flyovers are cleaned and maintained regularly whilst surrounding streetscapes are neglected. Street-vendors, beggars and squatters in the zones below flyovers linked to the airport, especially, are regularly moved on or harassed because they are deemed to damage the newly-modern experience and aesthetics of global elites arriving in Mumbai.

In keeping with the politics of flyover as a spectacle, Nasser Munjee, of Mumbai’s stock exchange, laments that such policies are necessary because “this cannot be the first sight for a foreign dignitary landing in Mumbai” (cited in Harris, 2013; 357). Such a politics of urban ‘clean-up’ – the violent simulation of bourgeois notions of environmental quality in and around the corridors of elite mobility – tend to be further exacerbated when cities host mega sports events or political summits.

Cars for the wealthy, carrying around 8% of the population, utilise two thirds of all road space in Mumbai. And yet public buses are deliberately excluded from some of the new highways; on others ‘captive’ bus lanes are installed to stop the buses getting in the way of the Mercedes and BMWs. “Administrators and political representatives” in Mumbai, writes Nikhil Anand (2006), “make transportation policy for the city as they see it through the windscreens of their air-conditioned cars...Automobiles are markers of class and upward mobility. And these dreams must remain intact and safe from danger.”

Highway-related demolitions are also extremely contested. It is increasingly obvious that these projects represent a brutal biopolitics of abandonment: a forcible reconstruction of space as an attempt to remove the marginalized and informal majority within a framing of neoliberal governmentality. “The open spaces produced by bulldozing the streets and living places of the poor are the grounds for pioneering new construction projects – roads, highways, shopping malls and high rises, to house, feed, entertain and connect the rich.” (Anand, 2006). Slum dweller groups and Non-Government Organisations (NGOs) thus now start with the assertion that a vision of Mumbai as a “slick city with wide roads, modern highways and more comfortable trains and buses, beautiful sea-face promenades and gardens and playgrounds” (McCreery, 2005) hides a systematic and violent programme to demonise and criminalise shanty dwellers – fully 60% of the entire city’s population inhabiting 6% of the land area – treating them as mere pollution in the way of such a bourgeois urban imaginary.

Salma, a resident of the Rafinagar shanty town – a place regularly threatened with demolition by the state – puts it bluntly. “The government wants to make [Mumbai into] Shanghai,” she says. “We don’t oppose Shanghai. But [the

government] comes and crushes us and goes away, like [one might crush] ants”. If the Government “tries to make Shanghai at the cost of the dreams and aspirations of the poor then this Shanghai will not be successful,” she contends. “Can Shanghai be made on the graves of the poor?” (cited in Graham et al, 2013; 138).

Under the Fast Lane: Ribbons of Potential?

“To speed by, and up on to the Westway [flyover] is to be in control. Or is it?” (Robertson, 2007; 34).

In keeping with my wider assertions of the need to take seriously the vertical politics of urban life (Graham, 2016), we must, penultimately, address the politics of the darkened strips *beneath* expressways, freeways and flyovers. The proliferation of elevated freeways means that the spaces beneath the new corridors of concrete in turn become a hidden world which, in a dark irony, sometimes provides shelter for those whose homes were demolished to make way for it. These ground-level ribbons of land have their own complex ecologies of use. Such ‘infrascapes,’ as Gabriel Duarte (n.d.) labels them, are often appropriated by adjacent communities to be used for impromptu schools, improvised recreation spaces, waste dumps, informal dwellings, places for improvised businesses or simply, for the homeless, as relatively safe -- and rainproof -- places to live and sleep. Commonly they are appropriated as homeless shelters, especially in cities with acute housing crises. (In February 2012, Paul Harris, of the UK’s *Daily Mail*, with characteristic subtlety, characterised one such space, used by a variety of Asian migrants, near Heathrow, as a ”slumdog flyover”(Harris, 2012)).



Figure 11 Ravi resting under the IIT flyover in South Delhi, India. Photo by Vicky Roy as part of her 'Street Dreams' series.

Source: Vicky Roy, with permission.

In Indian cities, marginalised communities struggle to access the neglected ribbons beneath raised highways. Many are home to large communities of street children, who are very vulnerable to sexual and economic exploitation as well as the health effects of high levels of air pollution (seen Figure 11). Recognising this, the 'Urbzoo' Non Government Organisations' in Mumbai is attempting to build night shelters, pocket parks

and play spaces beneath some the City's best known flyovers, the "JJ". "Imagine a Mumbai", their slogan reads, "where people are given priority over automobiles" (Urbzoo, n.d.). Echoing many other struggles around the world to appropriate the strips under flyovers as social spaces, play spaces or shelters for the homeless, they argue that a small series of interventions, turning the strip away from a mechanic monoculture for vehicles, could have a dramatic effect in a highly congested and contested megacity. "The JJ flyover ... is a mess of traffic above and a mess of traffic below. All accommodations are made for the car and truck, while pedestrians are left to fend for themselves," they argue:

"The flyover is considered dirty and dangerous. It is a space to rush through on your way from train to bazaar. But, this need not be so. We see the space under the flyover as having wonderful potential. It is sheltered from the rain and from the heat of the sun. Amazingly, it is also free of much of the politics, land tenure disputes and real estate speculation that plague much of Bombay. The flyover itself was proposed as necessary civic infrastructure. Why can't this idea be extended below as well?"

"What better place to open up a little room for the citizens of the city? With a few small interventions and amenities, we believe that this patch of land could be completely transformed and that if With a few small interventions and amenities, we believe that this patch of land could be completely transformed and that if given the chance, these slender patches of space would find a host of uses that would be constantly changing over time,

responsive to collective need, present aspirations
and seasonal calendar” (Urbzoo, n.d.).

Often, however, organising the spaces below flyovers for the marginalised is violent and coercive. Building the means to lift the select few onto structures which allow them unprecedented power and mobility, as ever, necessarily involved the destruction of the homes and places of the less privileged. In the high-tech city of Bangalore, for example, a violent programme of shanty demolition linked to elitist and expensive-tolled highway plans for the city’s new generation of wealthy IT business people, has illuminated these struggles with unintentionally dark irony. Such structures are widely praised in the business press and symbolizing India’s transformation into an economic superpower. As in Mumbai, their smooth, modern curves and high automotive speeds for the elite few are seen to contrast starkly with the chaos and congestion of street-level India. “Driving around Bangalore,” writes journalist Joshua J. Romero in a well-known engineering magazine:

“it’s immediately clear that the infrastructure hasn’t kept up with the IT boom in this once-sleepy South Indian city. Auto rickshaws, scooters, and motorcycles squeeze into a tight phalanx at each red light and choke the air with exhaust. But something miraculous happens as you make your way south, past the outer ring road. A ramp lifts a select few vehicles out of the weaving traffic and onto an elevated toll-way, where you suddenly have a bird’s-eye view of the urban landscape. This is the road to Electronic City, an oasis of glass and steel high-rises overlooking pristine black asphalt paths that snake through the perfectly-manicured

lawns of tech companies like Wipro, IBM, and Infosys Technologies.” (Romero, 2012).

The ground-level violence and erasure necessary to sustain such modernist fantasies are, as ever, absent from such depictions. At least 300 people, for example, were evicted at dawn and without notice from demolished shanties in the Mathikere neighbourhood of Bangalore as part of the construction by private consortium of a new raised, tolled expressways (Figure 12). They were offered new accommodation – in tiny, foundationless brick cubes actually squeezed into the extremely polluted and noisy spaces directly below the freeway (Figure 13). (The combined complex offers a strange and prosaic echo of the multi-level modernist megastructures that peppered the architectural theories of the late twentieth century.)



Figure 12 Demolition of part of the M.S. Jairam ‘slum’ community as part of highway construction in Mathikere, Bangalore, April 2010

Source: public domain.

https://en.wikipedia.org/wiki/Hosur_Road_Elevated_Expressway#/media/File:BETL-BMIC-Hosur-_Road-Junction.jpg



Figure 13 Under-flyover Housing offered to residents of ‘slums’ demolished to build the Mathikere expressway, Bangalore, 2010

Public domain: source

https://upload.wikimedia.org/wikipedia/commons/thumb/3/30/Marathalli_1.JPG/1200px-Marathalli_1.JPG

Refusing to move into the spaces, evicted communities who had earlier been caned by police at protesting the demolition of their homes, argued that the units were unsafe and far too small. "What will happen if a [concrete pillar supporting the highway] bursts?" asked Mariamma K whose family was pressurised to accept the ‘housing’. "And how can we move all our belongings in such a small room?" After a year of living in one of the units, one resident complained that “there’s no proper supply of electricity and the water is also very erratic.” She added, further, that “It is really risky to live under a flyover.

The constant vehicular movement disrupts our daily lives”
(quotes cited in Gangadhar, 2010).

Meanwhile, the strap-line for the highway builders to tempt in wealthy commuters to pay the electronic tolls for the raised highway strips being built across Bangalore, meanwhile, is that users can “virtually fly over” ground level constraints.⁴ This, perhaps, is the ultimate in elitist verticalised commuting: in India there were only 20 private cars per 1000 people in 2016 and a monthly pass for a single car to use the tolled expressway cost 1,365 Indian Rupees (21 U.S. Dollars) in November 2017 – a fortune for those in poverty. With the networks of private toll-highways stimulating new rounds of urban sprawl, moreover, an already parlous public transport network becomes ever-more inadequate as a means for poorer communities to commute to outlying sources of job opportunities.

The Future? Boulevards and Big Digs

Strikingly, as flyovers are raised to the sky in global south megacities, so, in some of the more environmentally progressive cities in the global north, they are increasingly dismantled or sunk into the ground (Cervero, 2006). Despite continuing traffic congestion and the continued power of pro-car lobbies, a widening range of such city governments are building high parks and boulevards whilst sweeping away the rusting remains of 1950s or 1960s elevated freeways.

In San Francisco, for example, the widespread damage that the Loma Prieta Earthquake of 1989 did to raised freeways has led to the demolition of the Embarcadero freeways. In Portland, the Harbor Drive freeway has been replaced a 37-acre waterfront park. And in Boston a whole complex of central flyovers has

⁴ Data from Bangalore Elevated Tollway (n.d.) at <http://www.blrelevated.co.in/>

been replaced by a vastly expensive tunnel system in the ‘Big Dig’ – one of the most costly construction projects in human history. Other notable flyover demolitions have occurred in Seoul. Architect Ash Sakula (2012) has even suggested that London’s notorious Westway flyover be converted to a large-scale imitation of the Promenade Plantée in Paris and the High Line in Manhattan, both of which are built on disused raised railways (Figure 14).



Fig 14 Ash Sakula’s architects’ ‘High Way’ vision for turning the The Westway flyover in West London into a public park. “This is London’s belvedere,” they write, “a high vantage point paced out in a great arching skyline of chestnut trees deeply rooted, literally, in a timber framed spine hosting commercial

and social enterprises who animate, cultivate and safeguard the park, and whose presence pays for the whole caboodle. Each of them gets some land where a thick layer of bio-remediated topsoil supports a continuously productive urban growing environment that makes every business, café and restaurant along the High Way food self-sufficient” (Sakula, 2012).

The dominating ethos in such projects is a commendable urge to reappropriate streetscapes away from the murderous projectiles of super-fast automobiles. But sometimes – as in Boston – they simply replace a mobility politics of extraordinarily expensive auto-dependence on the surface or raised onto flyovers, for one that lurks more surreptitiously below the surface within massive and extraordinarily expensive tunnel complexes. Whilst a step forward in terms of environmental quality, they can be but a small stepping stone in the longer journey towards urban mobility systems that are organised around notions of social and environmental justice.

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